

REMARKS

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Claims 1–4, 10 and 11 stand rejected under 35U.S.C. 102(b) as being anticipated by Ashenfelter (U.S.P 4,576,555), and claims 1-11, 13, 16 and 17 stand rejected under 35U.S.C. 103(a) as being unpatentable over Ashenfelter (U.S.P 4,576,555) in view of Fritchman (U.S.P 5,118,263). Claims 14 and 15 are rejected under 35 USC 103(a) as unpatentable over Ashenfelter-Fritchman in view of Hayashi.

To expedite the prosecution, claims 1 and 16 have been amended. Amended claim 1 covers Embodiment 1 shown in Figs. 1 to 3, and Embodiment 2 shown in Fig. 4. Amended claim 16 covers Embodiment 5 shown in Fig. 7.

Both amended claims 1 and 16 recite “said oil fence being located above said piston” to distinguish the present invention from Ashenfelter. According to Ashenfelter it is to be noted that oil is fed to the wrist pin 32 as well as to the piston by way of an oil passage 80 provided in the connecting rod 30 (column 6, Lines 5-7). On the other hand, according to the present invention, the scattered oil is collected by the oil fence which is located above the piston, and then the collected oil is dropped downward by the gravity so as to be lead to the piston. It is believed that 102 rejection relied on Ashenfelter has been overcome by the amendment, especially the recitation of the location of the oil fence as discussed above.

The Examiner also relies on Fritchman and states that Fritchman discloses:

Said cylinder block is provided with an oil fence (55) for receiving the lubricating oil spouting out from the upper end portion of said oil feed mechanism and an oil feed passage (57) for conducting the lubricating oil to a sliding surface of said piston (40);

According to Fritchman, an oil feed passage 57 is provided in the cylinder block as a relatively narrow conduit. With this arrangement there occurs an undesirable phenomenon. More specifically, when oil is dropped onto the sliding surface of the piston 44, oil is instantaneously heated so that bubbles of the coolant included in oil drop is vaporized. Then the

coolant gas tends to travel up through the oil feed passage 57, and the upstream flow of such a coolant gas blocks the continuous downstream drop or flow of the lubricant oil. As a result, sufficient oil cannot be fed to the piston 44 and also the coolant gas generated around the sliding surface of the piston 44 cannot escape. This phenomenon occurs because the diameter of the oil feed passage 57 is relatively small. However, according to the present invention, especially according to Embodiments 1, 2 and 5 of Figs. 1 to 3, 4 and 7 respectively, most of an upper portion of said sliding surface of said piston is exposed to a space located above said cylinder when said piston is in the vicinity of a bottom dead center in such a manner that said space forms a part of said oil feed passage to lead the oil collected by said oil fence to the upper portion of said sliding surface of said piston as recited in each of claims 1 and 16. Since the upper portion of the sliding surface of the piston is largely exposed to the upper space, lubricant oil can be dropped with receiving upstream stress by the coolant gas, while the coolant gas can escape upward without receiving downstream stress of the lubricant oil.

It is believed that amended claims 1 and 16 can be patentably distinguishable over the combination of Ashenfelter and Fritchman since amended claims 1 and 16 recite novel features related to the shape of the cylinder head which is not disclosed by any of the cited references. Remaining claims depend from claim 1 or 16 directly or indirectly, and thus these claims should be allowed when claims 1 and 16 are allowed.

It is believed that all of the rejections will be overcome by the current amendment. Reconsideration and an early allowance are respectfully solicited.

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185, under Order No. 21900-00052-US1 from which the undersigned is authorized to draw.

Dated: March 5, 2009

Respectfully submitted,

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